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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/501,015	04/11/2005	Yong-Seok Choi	CL-10389	3761
23123 7590 07/05/2007 SCHMEISER OLSEN & WATTS 18 E UNIVERSITY DRIVE SUITE # 101 MESA, AZ 85201			EXAMINER ZIMMERMAN, JOSHUA D	
			ART UNIT 2854	PAPER NUMBER
			MAIL DATE 07/05/2007	DELIVERY MODE PAPER

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

**Office Action Summary**

Application No.

10/501,015

Applicant(s)

CHOI, YONG-SEOK

Examiner

Joshua D. Zimmerman

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 07 March 2007.
- 2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-5 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-5 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 09 July 2004 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All    b) ☐ Some \*    c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☒ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)          | 4) <input type="checkbox"/> Interview Summary (PTO-413)           |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____                                      |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)          | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____  | 6) <input type="checkbox"/> Other: _____                          |

## DETAILED ACTION

### *Drawings*

1. The drawings are objected to under 37 CFR 1.83(a) because they fail to show the difference between the prior art and the claimed invention, as described in the specification. Any structural detail that is essential for a proper understanding of the disclosed invention should be shown in the drawing. MPEP § 608.02(d). Corrected drawing sheets in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. Any amended replacement drawing sheet should include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being amended. The figure or figure number of an amended drawing should not be labeled as "amended." If a drawing figure is to be canceled, the appropriate figure must be removed from the replacement sheet, and where necessary, the remaining figures must be renumbered and appropriate changes made to the brief description of the several views of the drawings for consistency. Additional replacement sheets may be necessary to show the renumbering of the remaining figures. Each drawing sheet submitted after the filing date of an application must be labeled in the top margin as either "Replacement Sheet" or "New Sheet" pursuant to 37 CFR 1.121(d). If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.
2. Figure 1 should be designated by a legend such as --Prior Art-- because only that which is old is illustrated. See MPEP § 608.02(g). Corrected drawings in

compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. The replacement sheet(s) should be labeled "Replacement Sheet" in the page header (as per 37 CFR 1.84(c)) so as not to obstruct any portion of the drawing figures. If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

### ***Claim Rejections - 35 USC § 103***

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

3. Claims 1-5 are rejected under 35 U.S.C. 103(a) as being unpatentable over Hruby et al. (US 6000332) in view of Sullivan (US 4424089) and Baum et al. (US 3851581).

Regarding claim 1, Hruby et al. teach "a method of silk screen printing (column 1, line 17) comprising the steps of: coating a diagonal screen made of a screen fabric having a mesh count of 200-300 with a light sensitive emulsion (column 1, lines 17-22), followed by drying the coated screen (column 3, lines 62-63); placing a film on the screen (column 1, lines 27-31); exposing the screen having the film placed thereon to ultra-violet light (column 1, lines 30-32); washing out the screen areas which have not

been exposed to the light (column 1, lines 37-40); and performing screen printing and ink curing (column 1, lines 41-44 and 55-57)."

Hruby et al. fail to specifically teach how long the film is exposed to ultra-violet light. However, Baum et al. teaches a screen printing method wherein the screen and film is exposed to ultra-violet radiation for 2 minutes in order to cure the image (column 4, lines 59-67). Therefore, at the time of the invention, it would have been obvious to one having ordinary skill in the art to expose the screen and film in the method of Hruby et al. to ultra-violet radiation for "1-2 min" in order to cure the image.

Hruby et al. also fail to mention the number of lines and the dot percentage of the film used. However, Sullivan teaches that typical screen printed films have fewer than 105 lines and dot sizes of between 20 and 80 percent (column 1, lines 64-68). Therefore, at the time of the invention, it would have been obvious to one having ordinary skill in the art to use a "film of 40-60 lines and 60-70 dot percentage" in the method of Hruby et al. in order to print an image by silk screening, as was conventional in the art at the time of the invention.

Regarding claim 2, Sullivan further teaches "wherein the film has 40 lines and 60 dot percentage (column 1, lines 64-68)."

Regarding claim 3, Sullivan further teaches "wherein the film has 60 lines and 60 dot percentage (column 1, lines 64-68)."

Regarding claims 4 and 5, Hruby et al. teach all that is claimed, but fail to specifically mention the specific details of the squeegee. Hruby et al. do teach that the properties of the squeegee, including both the way in which the squeegee is used and

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the angle used, are results-effective variables that have a direct effect on the amount of ink deposited to the substrate (column 1, lines 46-55). Further, one having ordinary skill in the art would recognize that the distance between the squeegee and the coater would inherently affect the thickness of the ink applied to the substrate. Also, one having ordinary skill in the art would recognize said distance as a property which is included in the variables taught by Hruby et al. as having a direct effect on the thickness of the ink applied. Therefore, at the time of the invention, it would have been obvious to one having ordinary skill in the art, at least through routine experimentation, to further modify the method of Hruby et al. such that the "distance between a coater and a squeegee is 5.2 cm" and such that "a squeegee angle is 45°."

### ***Conclusion***

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Joshua D. Zimmerman whose telephone number is 571-272-2749. The examiner can normally be reached on M-R 8:30A - 6:00P, Alternate Fridays 8:30A-5:00P.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Judy Nguyen can be reached on 571-272-2258. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

Joshua D Zimmerman  
Examiner  
Art Unit 2854

jdz

  
JUDY NGUYEN  
SUPERVISORY PATENT EXAMINER